



PORSF
11.3.193.1
7/6/92

6 July 1992

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Los Angeles, CA 90071-2007

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Attorneys at Law
777 High Street, Suite 200
Eugene, Oregon 97401

Re: Lynden Farms Site
6135 N. Basin Ave.
Portland, Oregon
Soil Testing
PBS Project No. 4912.10

Gentlemen:

Based on the Level I Environmental Assessment conducted by PBS Environmental at the property located at 6135 N. Basin Ave., PBS recommended shallow soil testing in various locations to determine whether the shallow soil may have been contaminated with hazardous materials. On June 22, 1992, PBS was authorized by Latham & Watkins, Attorneys at Law, to perform the testing. This report describes the methods and results of that testing, and PBS's conclusions and recommendations.

FIELD INVESTIGATION

PBS collected samples from four different locations on the subject property (see attached Sample Location Plan). The sample locations are briefly described below:

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<u>Sample #</u>	<u>Location</u>	<u>Analysis</u>
4912.10-01	Cleaning liquid storage area	pH
4912.10-02	Cleaning liquid storage area	pH
4912.10-03	Near electrical transformers	PCBs
4912.10-04	Near electrical transformers	PCBs
4912.10-05	(No Sample Taken)	
4912.10-06	Barrel storage, south fence	Hydrocarbon ID, TPH 418.1, PCBs (EPA 8080), solvents (EPA 8010)
4912.10-07	Barrel storage, south fence	Hydrocarbon ID, TPH 418.1, PCBs (EPA 8080), solvents (EPA 8010)
4912.10-08	Pipe trench in boiler room	Hydrocarbon ID, TPH 418.1, PCBs (EPA 8080), solvents (EPA 8010)

Hand-augered soil sample #4912.10-05 was originally intended to be collected near the waste oil tank, but the presence of an underground concrete slab 6 inches below the ground surface prevented auger penetration to the required depth.

Samples 4912.10-01 through 4912.10-04 were collected from beneath an asphalt slab. The asphalt was penetrated using a hammer and cold chisel, and the soil samples were collected using a stainless steel hand shovel. Samples 4912.10-06 through -08 were collected from a depth of 2" - 6" using a stainless steel hand shovel. All sampling tools were decontaminated between holes using non-phosphatic detergent and a distilled water rinse.

All samples were placed in 8-ounce glass sample jars (supplied by the laboratory) with Teflon lid liners. All samples were kept at 4°C during storage and transport. The samples were analyzed within eight days of receipt by the lab.

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FINDINGS

TABLE 1 - SAMPLE ANALYSES

<u>Sample #</u>	<u>pH</u>	<u>PCBs</u>	<u>Hydrocarbon Identification</u>	<u>TPH 418.1 (Quant.)</u>	<u>Chlorinated Solvents</u>
4912.10-01	9.07	-	-	-	-
4912.10-02	9.35	-	-	-	-
4912.10-03	-	ND	-	-	-
4912.10-04	-	ND	-	-	-
4912.10-06	-	ND	Diesel, Oil	2,800	ND
<i>Canal Storage</i> - 4912.10-07	-	0.3	Oil	280	ND
4912.10-08	-	ND	Diesel, Oil	120,000	ND

All values in parts per million (ppm) except pH

-: Test not run

ND: None Detected

CONCLUSIONS

Cleaning Liquid Storage Area

The pH results for the samples collected near the cleaning liquid storage area shows that the soil is strongly alkaline. A typical range for soil pH in Multnomah County is 5.5-6.5, with a value of 7.0 being neutral, and the range of alkalinity being from 7.0 to 14.0. The values measured in this study may indicate that some spillage of cleaning agents may have occurred in the area. However, it is unlikely that it has had a serious effect on subsurface soils since high-pH soils will typically neutralize with depth.

Electrical Transformer Area

Soil samples collected near the electrical transformers showed no detected levels of PCBs. Based on these results, it is unlikely that a significant release of PCBs has occurred in the area.

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South Fenceline Area

Soil samples collected near the barrel storage area gave elevated hydrocarbon readings (diesel fuel and heavy oil), and a small concentration of PCBs (Aroclor 1260) in one sample. The PCB concentration (0.3 ppm) is below the EPA cleanup level for soil. No chlorinated hydrocarbons were detected. The soil sample collected was a gravelly silt.

The concentration of hydrocarbons in sample #4912.10-06 (2,800 ppm) is significantly higher than the least stringent soil cleanup level of 1,000 ppm for diesel fuel/heavy oil products. This value is given only as a reference, and does not necessarily apply to this site, since the release apparently is not the result of a release from an underground storage tank. No standards currently exist for non-tank related releases of petroleum hydrocarbons.

Based on the laboratory analysis and field observations, it appears that a very small proportion of the petroleum hydrocarbons detected is diesel fuel, and that the observed contamination is primarily the result of spillage of waste oil stored in the area. The physical nature of such oil makes it relatively immobile in soil.

Spillage of such a material, if occurring in minor amounts, is not a reportable situation (similar to a gravel parking lot stained by oil leaking from automobile engines). However, if the contamination is found to have impacted groundwater, then the situation must be reported to the Oregon Department of Environmental Quality, and cleanup measures considered.

Pipe Trench in Boiler Room

The extremely high level of heavy oil in the sediment from the pipe trench in the boiler room is very likely to be the result of spillage of lubricating and/or hydraulic oil which are stored nearby. No chlorinated hydrocarbons or PCBs were detected in the sediment.

The trench is approximately 6 inches deep, and has concrete-lined walls and base. It is likely that the oil contamination is confined only to the sediment in the trench. In this situation, the sediment is not considered to be "soil", and therefore does not appear to be governed by state or federal cleanup regulations.

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RECOMMENDATIONS

None of the sample results constitute a situation which is reportable to the EPA or DEQ, nor is any other action required to be taken.

If the client wishes to determine the extent of the contaminated soil near the south fenceline, for the purpose of establishing current conditions and assessing potential risk to groundwater, then hand-augering to a depth of at least 5 feet in the area of sample #4912.10-06 should be performed, and analyzed by EPA method 418.1 Modified. The average depth to groundwater in the area is believed to be 15-20 feet below grade.

It is also recommended that the sediment/debris be removed from the trench in the boiler room to reduce the potential for future release of hydrocarbons to the soil.

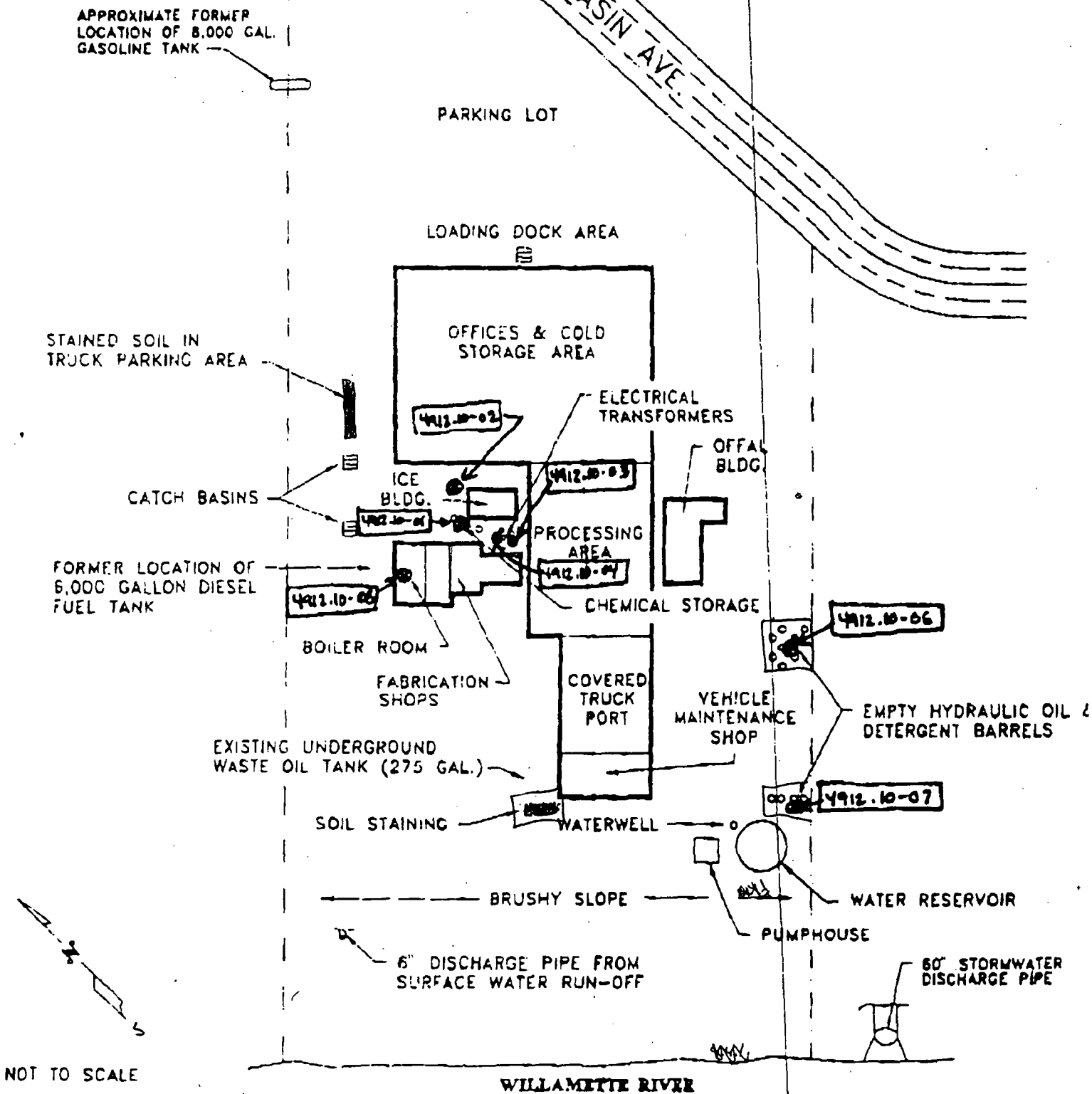
If you have any questions regarding this report, please call me.

Sincerely,



Erik Anderson
Geologist/Project Manager

Enclosures: Site Detail Plan
 Laboratory Reports
 Sample Chain-of-Custody Forms



4912.00

20MAY92

4912SDP

SITE DETAIL PLAN

6135 N. BASIN AVE., SWAN ISLAND

LATHAM & WATKINS



1230 SW MORTON ST.
PORTLAND, OREGON 97203
800/740-7838
FAX 503/240-0213

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SECTION

1..

COFFEY LABORATORIES INC.

12423 N.E. WHITAKER WAY, PORTLAND, OR 97230

(503) 254-1794 • FAX (503) 254-1452

CHAIN OF CUSTODY

COFFEY LABORATORIES - PENDLETON BRANCH

287 S.E. FIRST, PENDLETON, OR 97801

(503) 276-0385

PROJECT #: 4912 10	PROJECT NAME: N. Basin Ave.	P.O. #:	PAGE ____ of ____ PAGES PLEASE PRINT OR TYPE			
COMPANY NAME: P&S Environmental						
REPORT ATTENTION: Erik Anderson						
SAMPLES COLLECTED BY: Erik Anderson						
FIELD IDENTIFICATION:		COLLECTION		MEDIA	ANALYSIS REQUESTED	ANALYSIS REMARKS
ONE LINE PER SAMPLE CONTAINER		DATE	TIME			
4912 10-01		6/27/92	0915	Soil	PH	
4912 10-02			0920		PH	
4912 10-03			0945		EPA 8230	
4912 10-04			1000		EPA 8230	
4912 10-05			1005		ANALYSIS REQUESTED	
4912 10-06			1007		EPA 8210, EPA 8230, HCL, TH	from 11-01-92
4912 10-07			1015		EPA 8210, EPA 8230, HCL, TH	
4912 10-08		✓	1030	✓	EPA 8210, EPA 8230, HCL, TH	↓

RELINQUISHED BY: <i>Eh Anderson</i>	DATE/TIME: 6/24/92 0840	RECEIVED BY:	DATE/TIME:
RELINQUISHED BY:	DATE/TIME:	RECEIVED BY LAB: <i>Paul O'Keefe</i>	DATE/TIME: 6/24/92 0840

SAMPLE REMARKS:

WHITE COPY - COFFEY LABORATORIES

PINK COPY - CLIENTS COPY

 SHADED AREA FOR LABORATORY USE ONLY
 CHAIN OF CUSTODY INSTRUCTIONS ON BACK OF PINK COPY

Doc. ID: TPH-HCID.FOR
Volume: FORM
Section: 4.0
Revision #: 1.01
Date: March 6, 1991
Page 1 of 1

Analysis Performed: TPH-HCID qualitative scan for Hydrocarbons, by GC/FID.

Client PBS Environ Job # TP920624-B
Analyst JH Report Date 6/25/92
Date Analyzed 6/24 Date Extracted 6/24
LogBook Reference: Log 337 page 116 Reviewed 6/25
Standards' Reference Job Number: 920624-BL
QC Reference Job Number: 624-B
Prep. Info./Comments:

4912-

Summary of Qualitative Screening Test: 10-06 10-07 10-08

SAMPLE ID	B5	B5L	B6	B7		
Gasoline detected by TPH-HCID.						
Gasoline not detected by TPH-HCID.	✓	✓	✓	✓		
Diesel detected by TPH-HCID.	✓	✓		✓		
Diesel not detected by TPH-HCID.			✓			
Hydrocarbons heavier than C28 detected.	✓	✓	✓	✓		
Recommended further analysis: TPH-G						
TPH-D						
TPH-418.1	✓	✓	✓	✓		
None						

Surrogate Recoveries (%)	71	74	81	NA		
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Doc. ID: TPH-DEQ.WRK
Volume: Forms
Section: 3.0
Revision #: 1.00
Date: March 6, 1992
Page 1 of 1

COFFEY LABORATORIES, INC. - WORKSHEET

Analysis Performed: TPH-418.1 Modified, by the Oregon DEQ method,
IR Spectrophotometry

Client: PBS Environ

Job #: TP920624-B

Analyst: RAM

Report Date: 6/29/92

Date Analyzed: 6/29/92

Date Extracted: 2/27/92

Logbook Reference: Log 394 Page 37 Reviewed ✓

Standards' Reference Job Number: TP920624-BP

QC Reference Job Number: TP920619-AX

Prep. Info./Comments:

Units: mg/kg

4912.10-06

4912.10-08

4912.10-07

Parameter	Detection Limits	B5	B6	B7			
TPH's	7	2,800	230	120,000			

Parameter	Detection Limits						
TPH's							

Parameter	Detection Limits						
TPH's							

Parameter	Detection Limits						
TPH's							

COFFEY LABORATORIES * WORKSHEET

Analysis Requested: Purgeable Halocarbons in Soil, by EPA Method
8010, GC/MSD.

Client: PBS Environ Job #: TP920624 B

Analyst: M. L. Report Date: 7/5/92

Date Analyzed: 7/21-7/3/92 Date Extracted: 7/2/92

Logbook Reference: Log 377 p. 31 Reviewed: 12/7/92

Pres. Info/Comments:

Units: mg/kg

COMPOUND	DET. LIMIT	LAB BLANK	5h	6h	7h
Bromodichloromethane	0.2	ND	ND	ND	ND
Bromoform	↓	↓	↓	↓	↓
Bromomethane	0.8	↓	↓	↓	↓
Carbon tetrachloride	0.2	↓	↓	↓	↓
Chlorobenzene	↓	↓	↓	↓	↓
Chloroethane	0.4	↓	↓	↓	↓
2-Chloroethylvinylether	0.8	↓	↓	↓	↓
Chloroform	0.2	↓	↓	↓	↓
Chloromethane	1.2	↓	↓	↓	↓
Dibromochloromethane	0.2	↓	↓	↓	↓
1,2-Dichlorobenzene	↓	↓	↓	↓	↓
1,3-Dichlorobenzene	↓	↓	↓	↓	↓
1,4-Dichlorobenzene	↓	↓	↓	↓	↓
Dichlorodifluoromethane	1.2	↓	↓	↓	↓

Continued

Purgeable Halocarbons by EPA Method 8010. Continued

Job # TP920624 BClient: PBS Environ

COMPOUND	DET. LIMIT	LAB BLANK	5 _n	6 _n	7 _n
1,1-Dichloroethane	0.2	ND	ND	ND	ND
1,2-Dichloroethane					
1,1-Dichloroethene					
trans-1,2-Dichloroethene					
1,2-Dichloropropane					
cis-1,3-Dichloropropene					
trans-1,3-Dichloropropene					
Methylene chloride					
1,1,2,2-Tetrachloroethane					
Tetrachloroethene					
1,1,1-Trichloroethane					
1,1,2-Trichloroethane					
Trichloroethane					
Trichlorofluoromethane	0.8				
Vinyl chloride					

c:\form\work\spas010.htm

rev. September 27, 1990